

2008 IAFF CONVENTION
Resolution No. 15

COMMITTEE ASSIGNMENT: Policy

Re: Photoelectric Smoke Alarms

1 WHEREAS, over 3,000 citizens perish in
2 structural fires across the United States and Canada
3 every year; and
4 WHEREAS, in at least 30% of these fires,
5 it has been documented that the smoke alarms
6 operated and in 20% of these fires, the smoke alarms
7 were disabled; and
8 WHEREAS, there are two principle types
9 of smoke alarms that are intended to alert occupants
10 of building fires: ionization and photoelectric smoke
11 alarms. Ionization smoke alarms predominantly
12 detect the presence of extremely small particles of
13 smoke – often invisible – typical of flaming fires,
14 while photoelectric smoke alarms predominantly
15 detect larger smoke particles – always visible –
16 typical conditions found at smoldering fires; and
17 WHEREAS, research indicates that both
18 ionization and photoelectric smoke alarms are
19 intended to provide occupants time to escape.
20 However, ionization smoke alarms may not operate
21 in time to alert occupants early enough to escape
22 from smoldering fires; and
23 WHEREAS, current research indicates that
24 ionization smoke alarms detect flaming fires
25 marginally earlier than photoelectric smoke.
26 However, ionization smoke alarms are far more
27 prone to nuisance alarms increasing the probability
28 that they will be disabled by building occupants; and
29 WHEREAS, photoelectric smoke alarms
30 detect smoldering fires and fires starting in areas
31 remote from smoke alarms significantly earlier than
32 ionization smoke alarms; and
33 WHEREAS, dual alarms, also called
34 combination alarms, that contain both technologies
35 are available but the benefit over photoelectric in the
36 response to fires is marginal. They are more costly,
37 and they will experience the same nuisance problem
38 as ionization smoke alarms; and
39 WHEREAS, as many fires in residential
40 occupancies begin as smoldering fires, particularly

41 when occupants are sleeping, photoelectric smoke
42 alarms provide more effective all-around detection
43 and alarm than ionization alarms; and

44 WHEREAS, failure to detect a fire and
45 provide an early alarm places building occupants at
46 risk from an ever-escalating fire; and

47 WHEREAS, such escalating fires place the
48 lives of firefighters responding to an increasing risk
49 from such an escalating fire; and

50 WHEREAS, the increase in the use of
51 photoelectric technology has the potential to save
52 hundreds of lives each year and should be promoted
53 as the technology of choice by members of the IAFF
54 in their homes; and

55 **WHEREAS, IAFF members should**
56 **advocate for their mandatory requirement for**
57 **placement and use of photoelectric alarms in fire and**
58 **building codes, in a manner similar to recent**
59 **legislation in Vermont and Massachusetts; and**

60 **WHEREAS, the Professional Fire Fighters**
61 **of Vermont, with the assistance and technical expert**
62 **testimony from IAFF Local 718 member and Boston**
63 **Fire Department [REDACTED]**
64 **successfully lobbied for such legislation that on May**
65 **29, 2008, [REDACTED] signed into law as**
66 **the first in the nation legislation mandating the**
67 **installation of photoelectric smoke detectors in all**
68 **new construction and at the time of sale of property**
69 **in Vermont; therefore be it**

70 RESOLVED, That the IAFF propose and
71 support the mandate of only photoelectric smoke
72 detectors in United States and Canadian federal law,
73 in all state, provincial and local legislation, and in all
74 standard development organizations' building, fire
75 and life safety codes and standards; and be it further

76 RESOLVED, That this official IAFF
77 position be presented to the United States Fire
78 Administration, the United States National Institute
79 of Standards and Technology, the Congressional Fire
80 Services Institute, the National Fire Protection
81 Association, the International Code Council, the
82 International Association of Fire Chiefs, the National
83 Association of State Fire Marshals, the Council of
84 Canadian Fire Marshals and Fire Commissioners
85 Health Canada, the Standards Council of Canada, the
86 United States Consumer Product Safety

87 Commission, and the Consumers Association of
88 Canada.

Submitted by: Professional Fire Fighters of Vermont
Local 718, Boston, MA
Cost Estimate: None

COMMITTEE RECOMMENDATION: Adopt
CONVENTION ACTION: Adopt